

Remarks/Arguments

Claims 28 to 55 are pending.

The Office Action stated that the objection to Claim 15 because of informalities has been withdrawn.

The amendment filed on November 26, 2002, stands objected to under 35 U.S.C. 132 as introducing new matter into the disclosure for the reasons of record as set forth in Paragraph No. 5 of the Office Action mailed on February 13, 2003 (Paper No. 9). Applicants traverse this rejection.

The Examiner has not carried her burden of proof of establishing that material inserted into the specification is new matter. The Examiner has merely quoted the added material and asserted that it is new matter. The Examiner has not even set out any reason or explanation of why the added material is new matter, or any facts to support her assertion of new matter.

The Examiner is also in error in her assertion that applicants can only show that the added material is not new matter by "pointing" to "pages and lines in the specifications." Note that the Examiner has not cited any decisions, regulations, or the like as supporting her assertion. However, the burden of proof is on the Examiner, and not on the applicants.

Applicants have done that which is required of them. Applicants set out why there was support for the added material.

The Examiner then asserted that the added material was new matter. However, such assertion and quotation of the added material is not sufficient to carry the Examiner's burden of proof that the added material is new matter and

that applicants' reasons, etc., of support for the added material are insufficient, incorrect or the like.

Once the Examiner asserts that added material is new matter, the ball (i.e., burden of proof) is in her court. This is shown in the M.P.E.P. In this case, the Examiner has not carried her burden of proof.

To the simple question of why is the added material new matter (within the meaning of 35 U.S.C. 132), the Examiner has not provided any facts, reasons or the like in the record.

Section 706.03(o), "New Matter", of the M.P.E.P. states:

"If new matter is added to the specification, it should be objected to by using Form Paragraph 7.28."

"¶7.28 Objection to New Matter Added to Specification"

"The amendment filed [1] is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: [2]."

"Applicant is required to cancel the new matter in the reply to this Office Action."

"Examiner Note:

1. This form paragraph is not to be used in reissue applications; use form paragraph 14.22.01 instead.

2. In bracket 2, identify the new matter by page and line numbers and/or drawing figures and provide an appropriate explanation of your position. This explanation should address any statement by applicant to support the position that the subject matter is described in the specification as filed. It should further include any unresolved questions which raise a doubt as to the possession of the claimed invention at the time of filing. [Emphasis Supplied]

The Examiner has not provided in the record the required explanation, including supporting reasons, facts and the like, of (i) her position, and that (ii) addressed applicants' statement of why the added material was supported. The Examiner has not carried her burden of proof and has not established any prima facie showing of new matter.

The Office Action stated that applicants argue that the Examiner has not carried her burden of proof of factual establishment of a new matter. The Examiner has not carried her burden of proof.

The Office Action stated: that the Examiner respectfully disagrees with this argument; and that the Examiner expressly stated in the Office Action mailed on February 13, 2003 (Paper No. 9) that the material added with the Amendment filed on November 26, 2002, which is not supported by the original disclosure is as follows: *"The temperature of the aluminum foil, with which the coextruded plastic and adhesion-promotion agent is being combined, is such that the temperature at the surface of the plastic coating and the adhesion-promotion agent lies **below** the crystallite melt point (Tk) of the plastic" because it*

introduces new matter into the disclosure. This quotation by the Examiner from her earlier Office Action is only a conclusion-it does not provide the reasons and facts required to support such conclusions. The Examiner has not complied with M.P.E.P. 706.03(o). The required explanation is missing. The Examiner has not carried her burden of proof.

The Office Action stated that, to overcome the Examiner's statement of introducing a new matter, applicants have burden of proof that the amendment is not a new matter not by scientific/technical principles and the knowledge of one skilled in the art, **but pointing pages and lines** of the specification as filed showing **factual language** describing the amendment. Applicants traverse this statement as being clearly incorrect. Section 2163.07 of the M.P.E.P. is titled "Amendments to Application Which Are Supported in the Original Description" and states:

"The mere inclusion of dictionary or art recognized definitions known at the time of filing an application would not be considered new matter. If there are multiple definitions for a term and a definition is added to the application, it must be clear from the application as filed that applicant intended a particular definition, in order to avoid an issue of new matter and/or lack of written description."

Section 2163.07(a), titled "Inherent Function, Theory, or Advantage", allows insertion of subject matter based on inherency. The Examiner's assertion is clearly in error.

In the Amendment, filed on November 26, 2002, applicants included the following information to show that the subject matter into the specification was not new matter:

“Applicants extrude a coextrudate onto the aluminum foil and then heats the aluminum foil with the coextrudate thereon by continuously passing it through an oven at a temperature set so that the temperature of the surface of the polypropylene coating and the acid-modified polypropylene lies above the crystallite melt point of the polypropylene. The coextruded-coated aluminum foil is then immediately shock-like cooled (e.g., at least 10°C) so that the crystalline proportion at least in the surface area of the cooled polypropylene coating and the crystal grains in this area are as small as possible.”

“Since the oven heating requires that the temperature of the surface of the polypropylene coating and the acid-modified polypropylene of the exiting coextruded-coated aluminum coating lies above the crystallite melt point of the polypropylene, the temperature of the surface of the polypropylene coating and the acid-modified polypropylene of the coextruded-coated aluminum entering the oven lies below the crystallite melt point of the polypropylene. This is implicit disclosure in applicants’ specification. Original independent process Claim 1, for example, did not recite increasing the crystalline melt point temperature of the polypropylene, so the temperature (of the surface of polypropylene and the acid-modified polypropylene) had to be below the crystalline melt point

temperature of the polypropylene. In this manner, applicants' process is substantially and unobviously different from the process of Takano et al."

[Page 10, line 26, to page 11, line 15]

The Examiner, as required, has not addressed at any time applicants' statement of facts and reasons why the added material is supported. The Examiner has not carried her burden of proof or even rebutted applicants' showing.

This objection also has the problem that it refers to the amendment filed on November 26, 2002. It does not deal with the corrected added material since applicants replaced the earlier added material with modified added material inserted by the amendment filed on June 6, 2003. The final status of this Office Action should be withdrawn and a new (non-final) Office Action issued.

In the amendment, filed on June 6, 2003, applicants included the following information to show that the subject matter into the specification was not new matter:

"Applicant disagree that such quoted material is new matter for the reasons given above and below."

"Referring to Figure 1, the distance between the outer end of the nozzle of extruder 12 and the nip region of rollers 20, 22 is small. The result of this short distance is that the reduction in temperature of melted coextrudate 14, 16 is minimal. The melted coextrudate 14, 16 and the aluminum foil met going into the nip region and are in the nip region for an instance. However, the temperature of the melted coextrudate essentially instantaneously drops to the extent that the temperature of the outer

surface of the extrudate is less than the crystallite melt point of the polyolefin 14. This is so because, if the outer surface of the olefin was at or above such melt temperature, the pressure from the two rollers would squish and disrupt or force away at least the outer portion of the coextrudate. The temperature of the aluminum foil, before and after contact with the melted coextrudate, is below the crystallite melt point of polyolefin 14. The language objected to by the Examiner is supported by the disclosure, scientific/technical principles, and the knowledge of one skilled in the art as to what would happen in the first step of applicants' claimed process as a result of the apparatus and its arrangement shown in Figure 1, for example." [Page 22, line 15, to page 23, line 10]

The Examiner, as required, has not addressed at any time applicants' statement of facts and reasons why the added material is supported.

This objection should be withdrawn.

Claims 28 to 55 stand rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. Applicants traverse this rejection.

The Examiner has only made conclusionary statements which are insufficient to support this rejection. The Examiner has not carried her burden of proof. As quoted above, Section 706.03(o) of the M.P.E.P. requires that the Examiner's explanation address the unresolved questions that raise a doubt.

The Examiner has not provided such required explanation so it is assumed that there is no basis for the Examiner's rejection and conclusion.

Applicants have shown above that the claim recitation is necessarily described and supported in the specification, and by inherency, and by the knowledge of one skilled in the art.

The Office Action stated that the recitation "the temperature at the surface of the plastic coating (14) and the adhesion-promoting agent (16) lies *below* the crystallite melt point (T_k) of the plastic" in independent Claim 28 is a new matter since it was not described in the specification as filed. Applicants traverse this statement for the above and following reasons. Applicants coextrude the polyolefin (i.e., polypropylene or polyethylene) and the adhesion-promotion agent. The melted materials exit the coextruder nozzle. The coextrudate is still very hot for a substantial time after exiting the nozzle. These are inherent features of applicants' coextrusion, and the Examiner has not factually established otherwise in the record.

When the very hot coextrudate is combined with the aluminum foil, the temperature of the aluminum has to be low enough so that the outer surface of the polyolefinic portion of the coextrudate stays below the crystallite melt point (T_k) of the olefin. The coextrudate is combined with the aluminum foil between two rollers. The aluminum foil acts as a heat sink re the coextrudate – this is inherent - thereby maintaining the temperature of the outer surface of the plastic coating below the crystallite melt point (T_k) of the olefinic plastic.

The Examiner has not established in the record that applicants were not in possession of the claimed invention at the time of filing. The Examiner has not carried her burden of proof.

This rejection should be withdrawn.

Before specifically dealing with the Section 102 and Section 103 rejections, applicants point out that the Examiner has confused applicants' comments regarding anticipation and obviousness.

The Office Action stated that applicants argue that Heyes et al are limited to "thermoplastic polyesters" since Heyes et al show in comparative examples that polyolefin provide unsatisfactory results. This generic statement is totally incorrect because the Examiner has taken what applicants said regarding the obviousness rejection and tried to transfer it to applicants' comments on the anticipation rejection. Applicants' statement regarding the obviousness rejection is absolutely correct in fact and law. Furthermore, applicants' comments starting on page 17, after the statement:

"This [anticipation] rejection should be withdrawn."

deal with the unobviousness of applicants' claims over Heyes et al. by itself (since applicants had destroyed the anticipation rejection based on Heyes et al.).

Applicants' comments regarding the invention of Heyes et al. were:

"The invention of Heyes et al. is limited to using extrudates or coextrudates of polyester or polyesters. On this ground alone Heyes et al. does not anticipate any of applicants' process claims." [Emphasis Supplied] [Page 12, lines 9 to 11]

This statement is absolutely correct because it involves the invention of Heyes et al., not that which is disclosed in the entire document of Heyes et al.. The prior art and the comparative examples discussed and set out in Heyes et al. are not part of the invention of Heyes et al.

Since Comparative Example 11 and 12 (which are not part of the invention of Heyes et al.) in Heyes et al. also constitute prior art (separate from the invention of Heyes et al.), applicants also separately addressed such Comparative Examples 11 and 12 as follows:

“Heyes et al. discloses that polyolefin coatings on metal sheet (aluminum foil) are unsatisfactory for the manufacture of drawn and wall-ironed cans (DWI cans). Examples 11 and 12 of Heyes et al. are comparative examples of prior art to the Heyes et al. invention. Examples 11 and 12 use laminate types H and I, respectively, that each has coextruded polypropylene composite film on both sides of the aluminum sheet. (The laminates of both Examples 11 and 12 are stated to exhibit poor formability and to give metal failure in can forming.) Examples 11 and 12 of Heyes et al. use the Heyes et al. method of laminate formation that includes using “preheating the metal strips” and then passing the coextruded polyolefin composite films and the preheated metal strips into a pair of nip rolls. Accordingly, Examples 11 and 12 of Heyes et al. do not anticipate any of the applicants’ process claims.” [Emphasis Supplied]

[Page 12, lines 12 to 23]

Neither the invention of Heyes et al. nor the prior art and comparative examples set out in Heyes et al. anticipate any of applicants' claims.

To repeat, Comparative Examples 11 and 12 of Heyes et al. are not, and cannot be, part of the invention of Heyes et al. Part IIB of the Examiner's "Response to Arguments" is defective in fact and law and is not apropos.

Claims 28, 29, 51 and 52 have been rejected under 35 U.S.C. 102(b) as being anticipated by Heyes et al. (U.S. Patent No. 5,093,208) for the reasons of record as set forth in Paragraph No. 9 of the Office Action mailed on February 13, 2003 (Paper No. 9). Applicants traverse this rejection.

Applicants amended Claim 28 in the amendment filed on June 23, 2003. The Office Action mailed on February 13, 2003 could not have dealt with such amended Claim 28. Accordingly, since this anticipation rejection in the present Office Action states that it relies on the reasons set forth in the Office Action mailed on February 13, 2003, this present anticipation is defective in fact and on its face as it does not deal with and address Claim 28 as amended after February 13, 2003. Withdrawal of the final status of this Office Action and the issuance of a non-final Office Action dealing with amended Claim 28 is requested.

The Examiner cannot have established in the record a prima facie showing of obviousness because the present Office Action expressly states that it relies on the reasons in an Office Action issued before Claim 28 was amended.

Applicants coextrude the polyolefin (i.e., polypropylene or polyethylene) and the adhesion-promotion agent. The melted materials exit the coextruder

nozzle. The coextrudate is still very hot for a substantial time after exiting the nozzle. These are inherent features of the coextrusion in applicants' process.

When the very hot coextrudate is combined with the aluminum foil, the temperature of the aluminum has to be low enough so that the outer surface of the polyolefinic portion of the coextrudate stays below the crystallite melt point (T_K) of the olefin. The coextrudate is combined with the aluminum foil between two rollers. The aluminum foil acts as a heat sink re the coextrudate – this is inherent – thereby maintaining the temperature of the outer surface of the plastic coating below the crystallite melt point (T_K) of the olefinic plastic.

Nowhere does Heyes et al. teach or suggest using the aluminum foil as a heat sink. Heyes et al. teaches preheating the aluminum foil to above or near the melting point of the polyester - that then results in raising (not lowering) the temperature of the cooler polyester coating. Figures 1 and 2 show the polyester in rolls at room temperature. Heyes et al. uses the heated aluminum as a heat source. Heyes et al. does not anticipate any of applicants' process claims.

The invention of Heyes et al. is limited to using extrudates or coextrudates of polyester or polyesters. On this ground alone Heyes et al. does not anticipate any of applicants' process claims.

In discussing and disclosing the prior art (see column 1, lines 14 to 36) and the disadvantages thereof compared to Heyes et al.'s invention, Heyes et al. discloses that such prior art polyolefin coatings on metal sheet (aluminum foil) are unsatisfactory for the manufacture of drawn and wall-ironed cans (DWI cans). Examples 11 and 12 of Heyes et al. are examples of prior art using polyolefin

coatings for comparison to the Heyes et al. invention. Prior art Examples 11 and 12 use laminate types H and I, respectively, that each has coextruded polypropylene composite film on both sides of the aluminum sheet. (The laminates of both prior art Examples 11 and 12 are stated to exhibit poor formality and to give metal failure in can forming.) Prior art Examples 11 and 12 of Heyes et al. use the Heyes et al. method of laminate formation that includes using "preheating the metal strips" and then passing the coextruded polyolefin composite films and the preheated metal strips into a pair of nip rolls. Accordingly, prior art Examples 11 and 12 of Heyes et al. also do not anticipate any of the applicants' process claims.

Nowhere does Heyes et al. teach the use of aluminum sheet that has a temperature lower than the coextruded polyester film. Heyes et al. generically discloses laminating the coextruded polyester film to the metal sheet but such disclosure is not anticipatory because it does not teach all of the requirements and limitations of applicants' process claims. Heyes et al.'s generic disclosure is not a teaching of a process step where the relatively cool temperature of the aluminum foil causes the outer surface of the hot polyolefin to stay below its crystalline melt point (T_K). Heyes et al. states:

"The laminated metal sheet of the invention is prepared by a process which comprises adhering directly to one or both major surfaces of the metal sheet a film comprising a polyester, the lamination conditions being such that during lamination the polyester film or films in

the metal/polymer laminate is or are converted into non-crystalline or amorphous form.” [Col. 3, lines 33 to 39]

The only specific schemes of Heyes et al. are ones which use preheating of the aluminum sheet.

Heyes et al. states:

“In one preferred process of preparing the metal polymer laminates in accordance with the invention polyester monolayer film or films are adhered to the metal sheet by heating the metal sheet to a temperature (T1) above the melting point of the polyester films, the temperature (T1) being such that during lamination of the polyester films to the metal sheet, the outer surfaces of the polyester films remain below their melting points, *** ”

“In an alternative preferred process, the polyester film or films are composite films (A) comprising an inner layer (A1) and an outer layer (A2), and the composite polyester films are simultaneously adhered to the metal sheet by a process which comprises
(1) heating the metal sheet to a temperature (T1) above the softening point of the polyester inner layer (A1) but below the melting point of the outer layer (A2), ***,” [Emphasis supplied] [Col. 3, lines 40 to 62]

In the disclosure of Heyes et al. that deals specifically with the temperature of the coextruded plastic coatings, the coextruded plastic materials are at a temperature less than the preheated metal (aluminum) sheet. Heyes et al. states:

“Polymer/metal/polymer laminates were prepared by a lamination process performed in apparatus as illustrated schematically in FIG. 1 or FIG. 2 of the accompanying drawings. A metal sheet M was pre-heated by infrared or induction heating to an appropriate temperature T_1 by a heater 1. Temperature T_1 is usually within the range 140° and 350°C. Polyester films A and B were fed from feed rolls 2 and 4 and laminated to the opposite sides of the pre-heated metal sheet between lamination rolls 6, 8, ***.” [Emphasis supplied] [Col. 6, line 65, to Col. 7, line 5]

Figures 1 and 2 of Heyes et al. do not show any preheating of polyester films A and B, either rolled up or being fed to lamination rolls 6, 8. Since Heyes et al. does not recite any temperature for polyester films A and B before the lamination steps (rollers 6, 8), in accordance with scientific/technical practice, polyester films A and B were at room temperature.

Heyes et al. only discloses generically adhering a polyester to a metal sheet, without any reference to the temperature of either, or specifically adhering a polyester (or polyolefin) film to a metal sheet that has been preheated, with specific disclosure showing that the polyester film is at room temperature (that is below the preheating temperature of the metal sheet). Heyes et al. is not an anticipatory reference.

The Office Action stated that it is the Examiner's position that the surface area of the cooled PP layer has claimed properties such that if the quenched non-crystalline plastic still has small amounts of crystals, then the crystal grains are as small as possible *inherently* since it is produced by a method identical or

substantially identical processes to that of claimed invention. Applicants traverse this statement. The process of Heyes et al. and the process of the applicants' claims are not identical or substantially identified, as shown above. The difference between preheating the aluminum sheet and the coextruded polyolefin/adhesion-promotion agent results in substantial differences. The Examiner's assertion of Heyes et al. inherently achieving crystal grains as small as possible is faulty and lacks factual support.

Regarding Heyes et al.'s comparative prior art Examples 11 and 12, Heyes et al. states:

"Examples 11 and 12 show that laminates formed from polypropylene materials of the type described in GB 2003415 exhibited poor formality. Such laminates were found to give metal failure can forming." [Emphasis supplied] [Col. 9, lines 65 to 68]

Table II also recites poor formability for comparative prior art Examples 11 and 12.

So it is clear that Heyes et al. does not inherently achieve crystal grains as small as possible.

The feature of applicants' process of using hot coextruded polyolefin/adhesion-promotion agent and cooler aluminum foil helps provide different results. The hot/soft polyolefin/adhesion-promotion agent of applicants' process has more time in the nip region to effect elevated temperature adhesion to the aluminum foil than does the scheme of Heyes et al. wherein the plastic composite has to first be heated up by the preheated aluminum sheet during the

very short time period involved in passing through the two laminated rollers. The Examiner's attempt to use the concept of inherency fails.

Applicants' process produces containers that have essentially no white breaks in the deformation area.

Applicants claim a one-step production process that substantially differs from the multi-step production process of Heyes et al. There are actual physical differences in the processes that are not ones "claimed in terms of function property or characteristics." As shown above, the products of the two processes differ. The burden of proof has not shifted to applicants.

The Examiner has not factually established in the record that a prima facie showing of anticipation exists. The two processes are substantially different. Applicants have shown that the Examiner has not established a prima facie showing of anticipation.

This rejection should be withdrawn.

Not only is applicants' claimed process not anticipated by Heyes et al., it is unobvious over Heyes et al. The Examiner, who has the burden of proof, has factually established neither anticipation nor obviousness.

The following discussion shows that also Heyes et al. does not make any of applicants' claims obvious.

Applicants' process includes the step of coextruding the plastic (PP or PE) and the adhesion-promotion agent. The oleofinic plastic and the adhesion-promotion agent are melted in the extruder barrel. The New Encyclopedia Britannica, Macropaedia Volume 14, (1947), states:

“Extrusion. A major technique of the plastics industry, extrusion consists essentially of the melting and compression of plastic granules by the rotation of a screw conveyor in a long barrel to which heat and cold can be applied. The screw drives the plastic through a nozzle ***. *** so as to compress and generally homogenize the melting plastic. ***; it serves to complete the melting *** and *** pumping the molten plastic through the shaping nozzle.” [Emphasis supplied] [Page 519]

Upon exiting from the coextruder, applicants’ process moves the coextrudate rapidly to the two-rollers, where it is combined with the aluminum foil as both begin to pass through the two rollers. The aluminum foil acts as a heat sink.

One of the very core purposes of Heyes et al. is to provide an invention that does not use polyolefin coatings, that avoids the problems caused by the use of polyolefin coatings, and that provides advantages over polyolefin coatings. Heyes et al. states:

“It is known to use steel or aluminum coated with polyolefin coatings as a stock preparing DWI cans. Such materials are described, for example, in U.S. Pat. No 4,096,815 and British Patent 2003415; as far as we are aware, such materials have not found commercial application.”

“We have found that polyolefin coatings do not form as well as thermoplastic polyesters.” [Emphasis supplied] [Column 1, lines 14 to 21]

“Such [substantially non-crystalline or amorphous thermoplastic polyester] coatings out-perform polyolefin coatings in DWI can forming.

and retain better continuity and protection." [Emphasis supplied] [Column 1, lines 41 to 43]

Heyes et al. directs away from the use of polyolefin coatings and, hence, also directs away from applicants' claimed process.

As shown above, the comparison prior art Examples 11 and 12 of Heyes et al. (that combined polypropylene composite films and preheated aluminum sheet) provided "poor" formability and gave metal failure in can forming. One ordinarily skilled in the art is pointed away by Heyes et al. from the use of polypropylene coatings.

In the amendment (of August 28, 1991) in Heyes et al.'s U.S.S.N. 07/642,566, upon which Heyes et al. issued, Heyes et al. submitted a copy of Koga et al., U.S. Patent No. 4,849,293, (and a copy of corresponding European Published European Patent Application 0262929) that had been cited in Heyes et al.'s corresponding U.K. application (the Examiner initialed references on Form PTO-FB-A820). In the amendment, regarding Koga et al., Heyes et al. stated:

"Two particular amorphous polyester compositions are described.

A first composition comprises (A) a low crystalline modified polyolefin, (B) an amorphous polyester and (C) a silane coupling agent. A second amorphous polyester composition comprises (A), (B) and (C) together with (D) an inorganic filler. In both compositions (A) forms a 'matrix phase', and (B) forms 'a domain phase.' Composite laminates for damping materials are described (see Col. 6, lines 59 et seq. of '293). These include metal/polyester composite structures."

“There appears to be no disclosure of a process for making a laminate of metal and non-crystalline polyester which includes a step of providing a sheet of metal and a film of biaxially-oriented polyester having a semi-crystalline structure. Furthermore, there does not appear to be two separate heating steps followed by a rapid quenching step to form a laminate of metal and non-crystalline polyester. Additionally, there appears to be no disclosure of a composite polyester film comprising an inner polyester layer and an outer polyester layer.”

“The matrix/domain phase composition of this document would be unlikely to be suitable in the manufacture of containers. If a polyolefin matrix phase were used in the manufacture of cans, it would not survive the drawing and wall ironing to which the laminates of the present invention are subjected.” [Emphasis supplied] [Page 5, line 12, to page 6, line 3]

During the prosecution of Heyes et al., Heyes et al. further directed away from polyolefin coatings and away from applicants' claimed process. Heyes et al. further does not make applicants' claimed invention obvious.

A copy of the above-noted pages from the file wrapper of Heyes et al. are enclosed.

Claim 55 stands rejected under 35 U.S.C. 102(b) as being anticipated by Heyes et al. (U.S. Patent No. 5,093,208) for the reasons of record as set forth in Paragraph No. 12 of the Office Action mailed on August 5, 2003. Applicants traverse this rejection for the reasons stated above and below.

The Office Action stated that Heyes et al. discloses a process for production of an aluminum foil (see column 2, lines 15 to 24) coated with a (sealable and sterilizable) plastic based on polypropylene (PP) consisting of co-extruding the plastic with maleic anhydride (MAH) graft modified PP (an adhesion promoting agent) and combining co-extruded PP composite of Type I with the aluminum foil between two rollers (see Fig. 4; Table I, type H; column 3, lines 35; and column 8, lines 9 to 10), the temperature at the outer surface of the plastic lies below the (crystallite) melt point (T_k) of the plastic (see column 3, lines 25, 46 and 47), then passing continuously the coated aluminum foil through a heater 10 (oven) to increase the adhesion strength between the aluminum foil and the plastic coating (see Fig. 1; column 7, lines 12 to 16) with a temperature set so that the temperature at the outer surface of the plastic lies above the (crystallite) melt point (T_k) of the plastic (see column 3, lines 48 to 51) and quenching (cooling in a shock-like manner) the coated aluminum foil such that the crystallite plastic is converted non-crystalline or amorphous form (i.e., crystalline proportion at least in the surface area of the cooled PP layer is as small as possible) (see column 1, lines 45 to 47; column 2, lines 1 to 15; and column 3, line 39).

Applicants traverse this statement for the reasons given above under the Section 102 rejection. The Examiner's reasons and description of Heyes et al. are in error as shown above. For example, the use of Heyes et al. is limited to "thermoplastic polyesters" (column 1, lines 20 and 21). Prior art comparative Examples 11 and 12 of Heyes et al. use coextruded polypropylene composite film in the Heyes et al. process to show that polyolefin provides unsatisfactory

results, but such prior art polyolefin comparative examples do not anticipate because they use the non-anticipating production process of Heyes et al.

The Office Action stated that it is the Examiner's position that the surface area of the cooled PP layer has claimed properties such that if the quenched non-crystalline plastic still has a small amount of crystals, then the crystal grains are as small as possible *inherently* since it is produced by a method identical or substantially identical processes to that of claimed invention. Applicants traverse this statement as being in error for the reason given regarding the above Section 102 rejection. The process of Heyes et al. has not been factually shown in the record to be identical or substantially identical to applicants' claimed process. If the Examiner continues in his assertion, then she is requested to factually prove it by citing supporting literature or to submit her own declaration on the matter.

The Office Action stated: that it is held that where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, claimed properties or functions are presumed to be inherent, and see MPEP 2111.02, 2112.01, In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). "When the PTO shows a sound basis for believing that the products of the applicants and the prior art are the same, the applicants have the burden of showing that they are not," and In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). These decisions are not apropos or controlling because the involved processes are not identical or substantially identical. The Examiner still has the burden of proof and she has not carried it in the record.

This rejection should be withdrawn.

Claims 30 to 50, 53 and 54 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Heyes et al. (U.S. Patent No. 5,093,208) in view of Takano et al. (US 5,837,360) for the reasons of record as set forth in Paragraph No. 11 of the Office Action mailed on February 13, 2003 (Paper No. 9).

Applicants traverse this rejection.

Applicants have shown above that Heyes et al. does not make any of applicants' claims obvious. Takano et al. does not cure the defects of Heyes et al. in the search for applicants' claimed invention. Heyes et al. also teaches one ordinarily skilled in the art to not use polyolefin coatings aluminum foil (metal sheet) if drawn and wall-ironed cans are to be manufactured therefrom.

Takano et al. also directs one ordinarily skilled in the art away from applicants' claimed invention. In Takano et al., polypropylene and a modified polypropylene are melt-coextruded and laminated on at least one side of a preheated steel sheet, i.e., desirably preheated to a temperature of from 100°C to 160°C. Takano et al. asserts that any preheating below 100°C is unsatisfactory because then the laminated entity would be below the minimum temperature for initiation of the subsequent quenching. Note also that Takano et al. does not disclose laminating by passing the films and sheet through a pair of rollers.

Levendusky et al., i.e., U.S. Patent No. 5,919,517 (cited by the Examiner) in its background-of-the-invention section, states:

“U.S. Pat. No. 5,093,208 to Heyes et al. discloses a method for forming a laminated metal sheet in which a precast thermoplastic polyester film is pressed against one or both surfaces of a metal sheet to adhere the film to the sheet in a pressed against one or both surfaces of a metal sheet to adhere the film to the sheet in a non-crystalline form. The uncoated sheet of metal is heated to a temperature above the melting point of the polyester film and the film is applied to the sheet under pressure to form a laminate material.” [Emphasis supplied] [Column 1, lines 29 to 37]

(Levendusky et al. is assigned to ALCOA.) The art views Heyes et al. as preheating the uncoated aluminum sheet to a temperature above the melting point of the polyester film. The Examiner’s attempt to stick Takano et al. into Heyes et al. would destroy the invention of Heyes et al.

The Examiner referred to Levendusky et al. Levendusky et al. applies extruded, continuous, molten polymer web to a heated metal strip. Levendusky et al. also directs away from applicants’ claimed invention.

The Office Action stated that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used any conventional cooling means including ice-cooled water, cooled gas, water spray, or partial looping over at least one cooled roller of a metal foil containing laminate shock-like cooling of a coated metal foil of Heyes et al. in view of Takano et al. since Takano et al. teaches that the shock-like cooling can be carried out by any known means provided that cooling conditions are satisfied. Applicants traverse

this statement. One ordinarily skilled in the art would not have any motivation to insert Takano et al. into Heyes et al.

Heyes et al. discloses (i) a generic process and (ii) two preferred subgeneric/species processes. The two preferred subgeneric/species processes are each multi-stepped with one step thereof using a metal sheet preheated to above the melting point of the polyester film (i) or preheated to between above the softening point of the polyester inner layer and below the melting point of the outer layer (ii). Column 3, lines 40 to 45, of Heyes et al. does not mention PP - it only recites polyester. Nowhere does Heyes et al. say it is preferred to laminate coextruded hot PP-based layers to a heated aluminum foil (this step is one step in a preferred multi-step process). Furthermore, Heyes et al. directs away from the use of PP because it provides poor results, etc.

Also, nowhere does Heyes et al. disclose the use of hot coextruded PP-based layers. Figures 1 and 2 show rolls of polyester film being used - there is no indication that they are other than at room temperature.

Takano et al. requires a steel sheet preheated between 100°C and 160°C. Takano et al. does not disclose the use of rollers for lamination.

Takano et al. states: "The temperature of the *** combination *** becomes nearly equal to the preheating temperature of the steel sheet immediately after the lamination ***." [Column 5, lines 36 to 40] Takano et al. does not use rollers so it is not relevant to Heyes et al.

Applicants achieve lamination in a very short time, that is, almost instantaneously in the very short distance of contact point/region between the

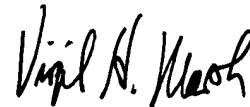
two rollers. The melted coextrudate adheres to the aluminum foil, with apparently improved adherence, almost instantaneously, with its outer surface cooling below the crystallite melt point.

The two rejection references are not combinable in the search for applicants' claimed invention. Even if the two rejection references are combined the result is not applicants' claimed invention. The Examiner has not factually established in the record a prima facie showing of obviousness.

This rejection should be withdrawn.

Reconsideration, reexamination and allowance of the claims are requested.

Respectfully submitted,



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Date: May 13, 2004

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